

(19) 日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11)特許出願公開番号  
特開2001-236024  
(P2001-236024A)

(43)公開日 平成13年8月31日(2001.8.31)

(51) Int.Cl. 譲別記号  
 G 09 F 9/00 312  
 H 04 N 5/64 521  
 581

F I	テ-マコ-ト(参考)
G 0 9 F 9/00	3 1 2 5 G 4 3 5
H 0 4 N 5/64	5 2 1 P
	5 8 1 C

審査請求 未請求 請求項の数1 OL (全 4 頁)

(21)出願番号 特願2000-52219(P2000-52219)

(71)出願人 000005108

(22)出願日 平成12年2月24日(2000.2.24)

東京都千代田区神田駿河台四丁目 6 番地

(72)発明者 片山 猛  
神奈川県横浜市戸塚区吉田町292番地 株  
式会社日立製作所デジタルメディアシステ  
ム事業部内  
(74)代理人 100075096  
弁理士 作田 康夫  
Fターム(参考) 5G435 AAD0 BB12 DD03 EE13 EE16

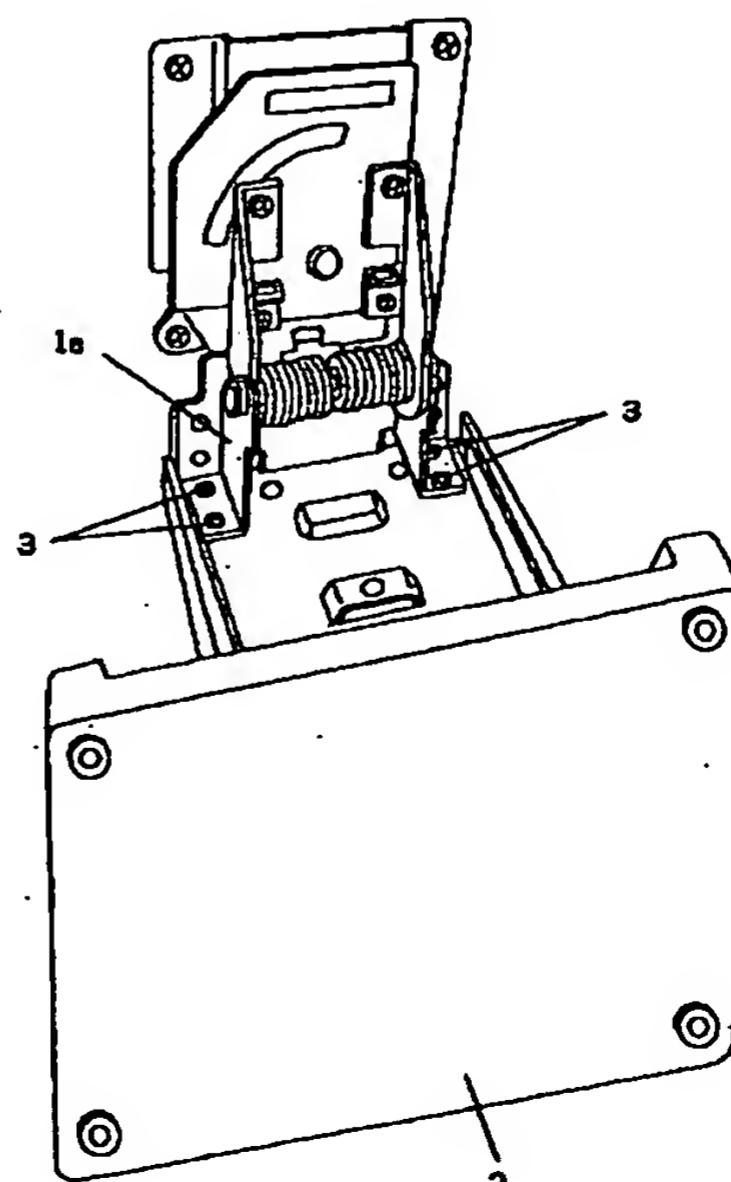
(54) 【発明の名称】 画像表示装置の壁掛け構造

### (57) 【要約】

【課題】スタンドに取り付けられている画像表示部を壁に掛けて使用するとき、壁掛け専用の固定具を使用せずスタンドの向きを変えて取り付けることにより、スタンドが固定具の役割を成し壁掛け可能となるため、壁掛け専用の固定具を用意する必要がなくなる。これにより、支出を抑えることができ、省資源化にも貢献する。

【解決手段】画像表示部からスタンドを外すとき、スタンドは画像表示部固定用ネジ4本を外すことにより容易に外せる。外されたスタンドは、壁に垂直にネジ4本で容易に固定できる。画像表示部と壁に固定されたスタンドは、スタンドを外す前の取り付け状態とは異なりスタンドがセット前方に90°回転した状態になっているが、画像表示部固定用ネジ4本を使って容易に取り付けることができ、これにより壁に掛けて使用できる。

6



## 【特許請求の範囲】

【請求項1】 スタンドに取り付けられている画像表示部を壁に掛けて使用するとき、壁掛け専用の固定具を使用せずスタンドの向きを変えて取り付けることにより、スタンドが固定具の役割を成し、壁掛け可能となることを特徴とする画像表示装置の壁掛け機構。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】 本発明は、スタンドに取り付けられている液晶等のフラットディスプレイモニターやフラットテレビ等の画像表示部を有する構造物に属する。

## 【0002】

【従来の技術】 スタンドに取り付けられている画像表示部を壁に掛けて使用するとき、画像表示部からスタンドを外し壁掛け専用の固定具を画像表示部に取り付けることによって、壁掛けが可能となる構造であった。

## 【0003】

【発明が解決しようとする課題】 従来の方法では、スタンドに取り付けられている画像表示部を壁に掛けて使用するとき壁掛け専用の固定具を使用する必要があった。この壁掛け専用の固定具は、画像表示部がスタンドに取り付けられている画像表示装置においては壁掛けを行わない場合必要ないので、画像表示装置とは別部品になっている。

【0004】 本発明により、スタンドに取り付けられている画像表示部を壁に掛けて使用するとき、スタンドの向きを変えて取り付けることにより壁掛け可能となるため、壁掛け専用の固定具を用意する必要がなくなる。

## 【0005】

【課題を解決するための手段】 画像表示部からスタンドを外すとき、スタンドは画像表示部固定用ネジ4本を外すことにより容易に外すことができる。外されたスタンドは、壁に垂直にネジ4本で容易に固定することができる。画像表示部と壁に固定されたスタンドは、スタンドを外す前の取り付け状態とは異なりスタンドがセット前方に90°回転した状態になっているが、画像表示部固定用ネジ4本を使って容易に取り付けることができ、これにより壁に掛けて使用することができる。

## 【0006】

【発明の実施の形態】 以下、本発明の実施の形態について図1から図7に基づき説明する。

【0007】 図1は液晶ディスプレイモニターを示す (a) 正面図、(b) 側面図である。液晶ディスプレイモニターは画像表示部1、スタンド2から成り立っている。

【0008】 図2は画像表示部1とスタンド2の接続箇所が見えるように後部カバーを外した (a) 後面図、(b) 側面図である。画像表示部1とスタンド2の接続は、画像表示部1のチルトユニット1aとスタンド2を

ネジ3(4本)で締結することにより成り立っている。

【0009】 図3はチルトユニット1aとスタンド2がネジ3(4本)で接続された状態の斜視図である。画像表示部1を壁に掛けて使用するとき、壁掛け専用の固定具を使用せずスタンド2が固定具の役割を果たすようするため、スタンド2の向きをセット前方に90°回転した状態にしてチルトユニット1aに取り付けることとする。以下、図4、5、6によりチルトユニット1aとスタンド2の分解、接続方法を説明する。

【0010】 図4はチルトユニット1aとスタンド2の分解斜視図である。まず、ネジ3(4本)を外しチルトユニット1aとスタンド2を分解する。チルトユニット1aとスタンド2は、ネジ3(4本)を外すことにより容易に分解することができる。

【0011】 図5はスタンド2の向きをセット前方に90°回転した状態のチルトユニット1aとスタンド2の分解斜視図である。チルトユニット1aとスタンド2には、スタンド2がこの向きでもチルトユニット1aに接続できるようにネジ穴が設けてあり、ネジ3(4本)により容易に接続することができる。

【0012】 図6はスタンド2の向きをセット前方に90°回転させた状態で、チルトユニット1aとスタンド2をネジ3(4本)で接続した斜視図である。この状態では画像表示部1とスタンド2が垂直に接続されるため、スタンド2の底面を壁面に平行に固定することにより画像表示部1と壁面が平行に配置される。

【0013】 図7は後部カバーを取り付けた画像表示部1を壁に掛けた状態の(a)正面図、(b)側面図である。スタンド2をネジ4(4本)で壁に固定することにより、画像表示部1を壁に掛けた状態にすることができる。

【0014】 以上により、画像表示部1を壁に掛けて使用するとき、スタンドの向きを変えて取り付けることにより壁掛け可能となるため、壁掛け専用の固定具を用意する必要がなくなる。

## 【0015】

【発明の効果】 本発明により、スタンドに取り付けられている画像表示部を壁に掛けて使用するとき、壁掛け専用の固定具を使用せずスタンドの向きを変えて取り付けることにより、スタンドが固定具の役割を成し壁掛け可能となるため、壁掛け専用の固定具を用意する必要がなくなる。これにより、支出を抑えることができ、省資源化にも貢献することができる。

## 【図面の簡単な説明】

【図1】 液晶ディスプレイモニターの外観図である。  
【図2】 チルトユニット、スタンド、ネジの実装図である。

【図3】 チルトユニット、スタンド、ネジの斜視図である。

【図4】 チルトユニット、スタンドの分解斜視図であ

3

4

る。

【図5】壁掛け状態のチルトユニット、スタンドの分解斜視図である。

【図6】壁掛け状態のチルトユニット、スタンド、ネジの斜視図である。

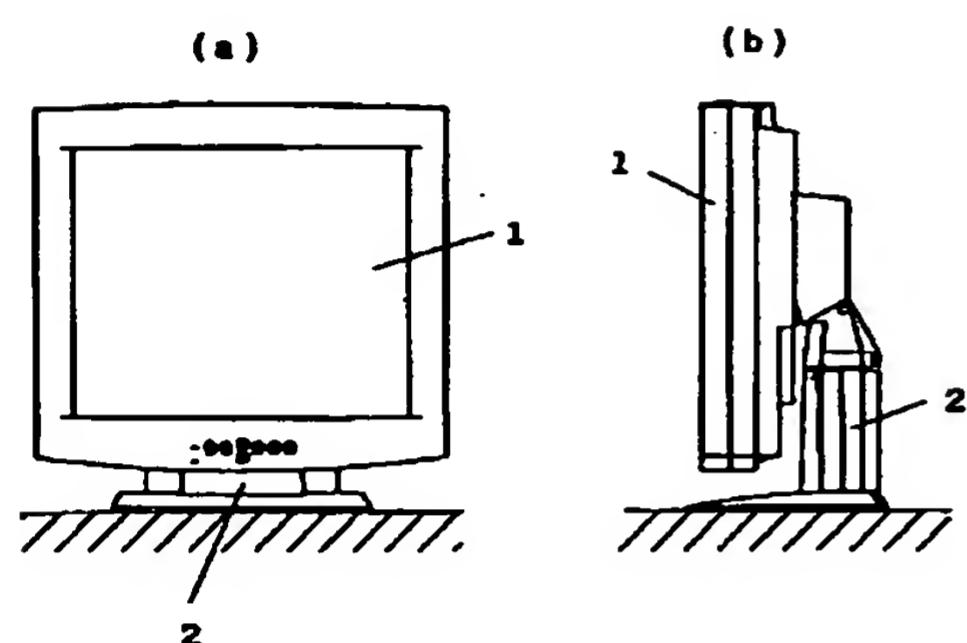
【図7】壁掛け状態の液晶ディスプレイモニターの外観図である。

【符号の説明】

1…画像表示部、1a…チルトユニット、2…スタンド、3…ネジ4本、4…ネジ4本。

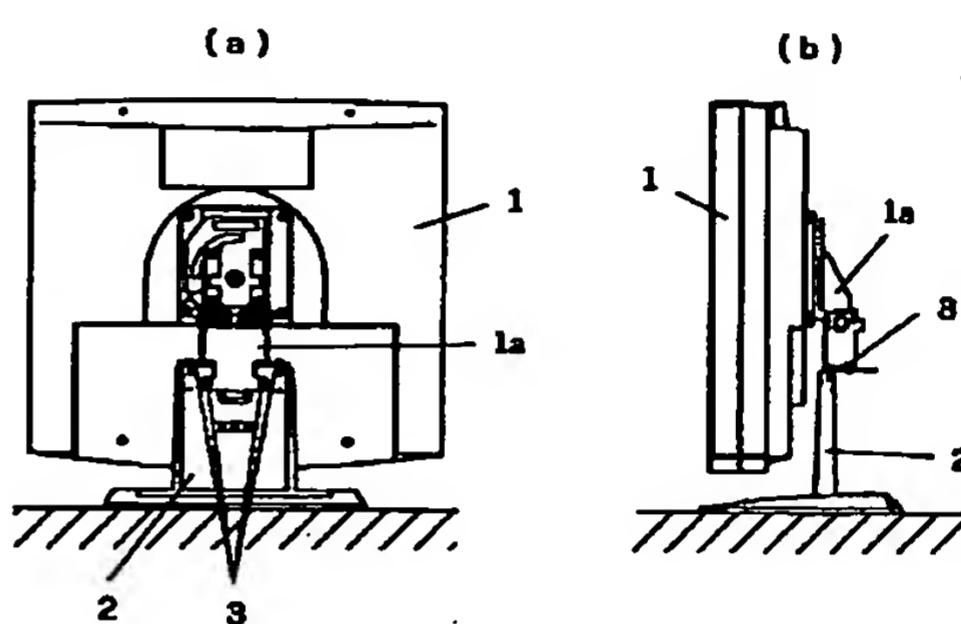
【図1】

図 1



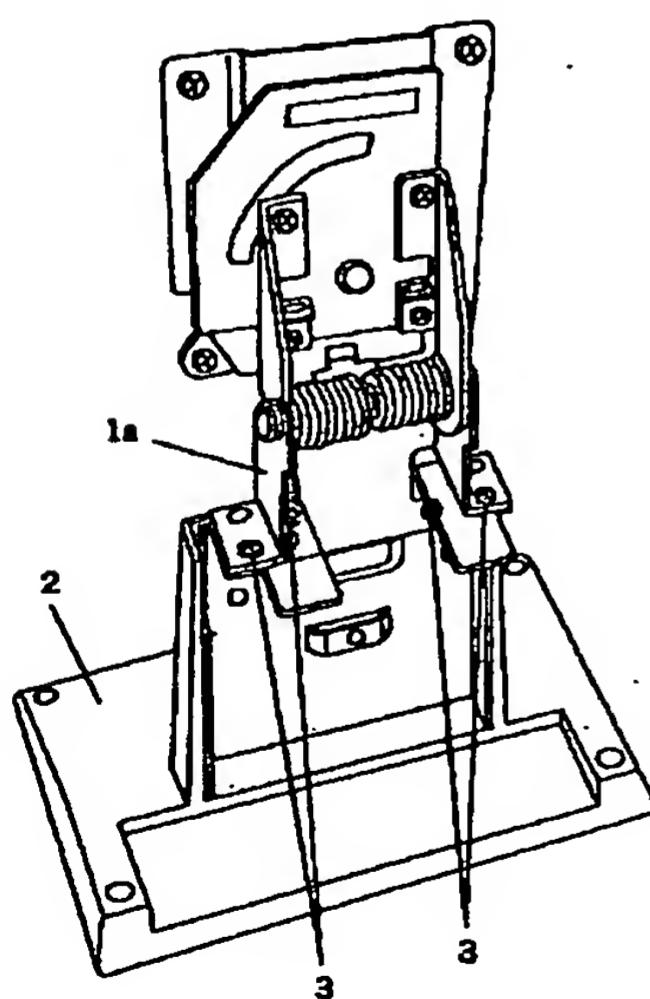
【図2】

図 2



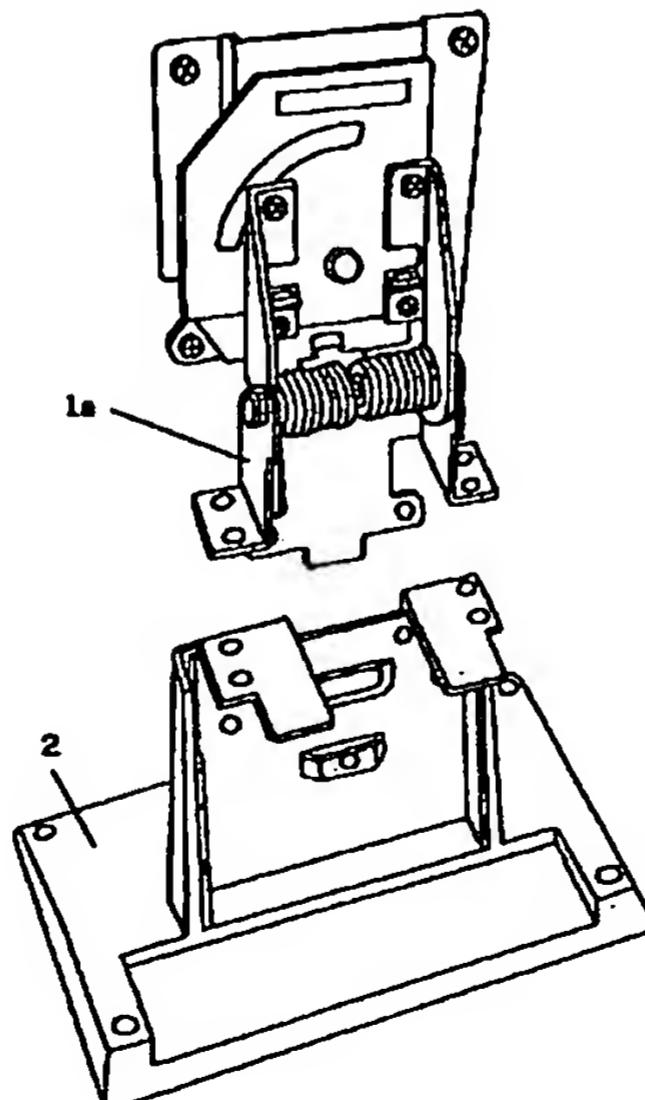
【図3】

図 3



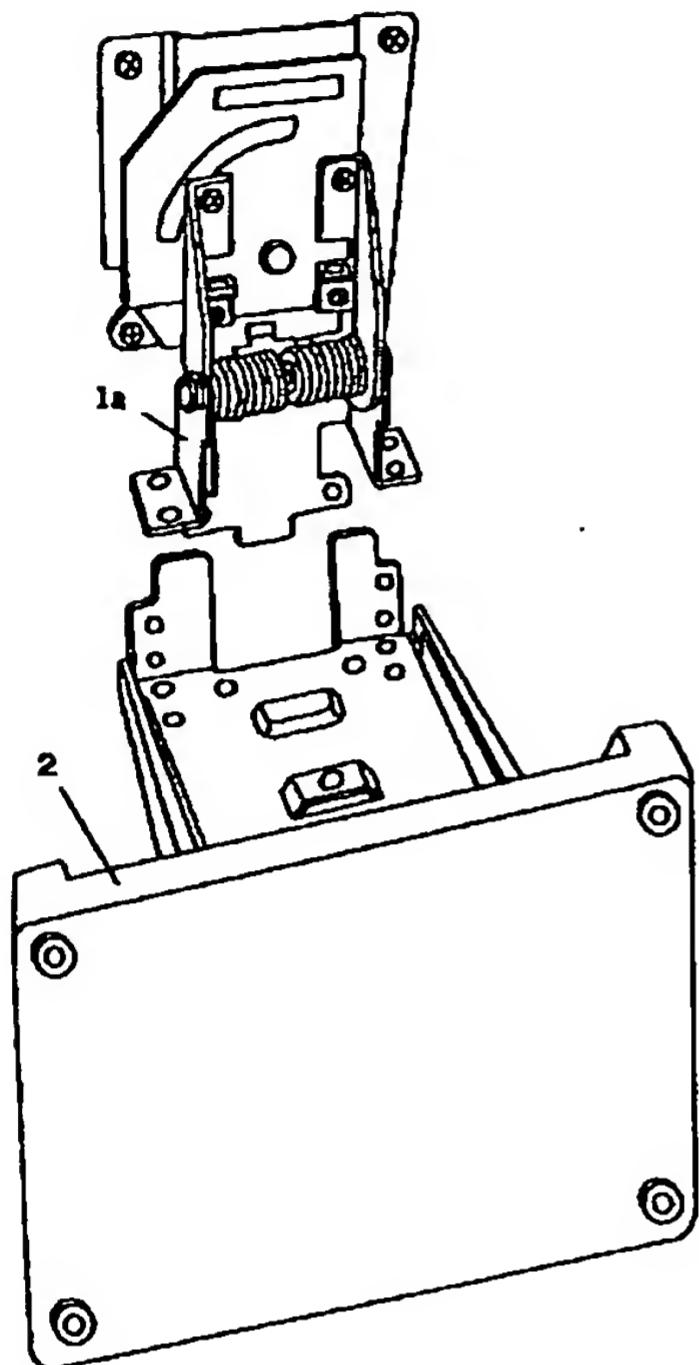
【図4】

図 4



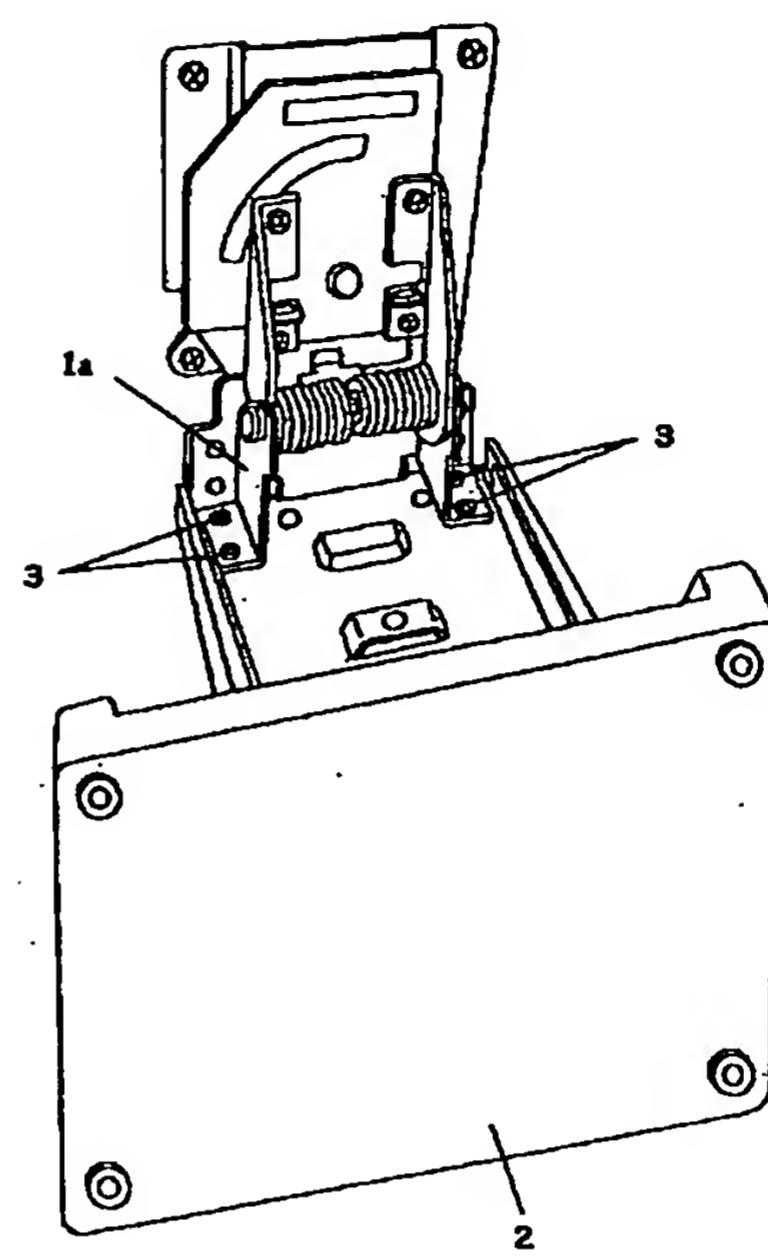
【図5】

図 5



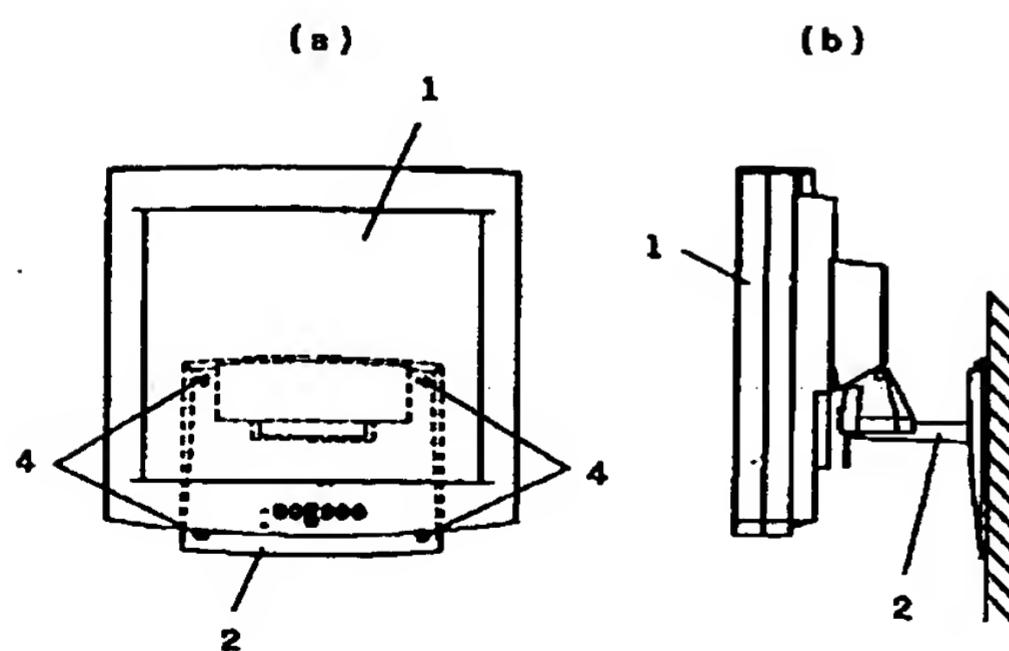
【図6】

図 6



【図7】

図 7





(19)

Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 132 024 A1

(12)

## EUROPEAN PATENT APPLICATION

(43) Date of publication:

12.09.2001 Bulletin 2001/37

(51) Int Cl.7: A47B 21/00, A47B 83/00

(21) Application number: 01104574.7

(22) Date of filing: 06.03.2001

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 07.03.2000 KR 2000006309

(71) Applicant: CHOI, Deok-Whan  
Seoul (KR)

(72) Inventor: CHOI, Deok-Whan

Seoul (KR)

(74) Representative: Best, Michael, Dr. et al

Lederer, Keller & Riederer

Patentanwälte

Prinzregentenstrasse 16

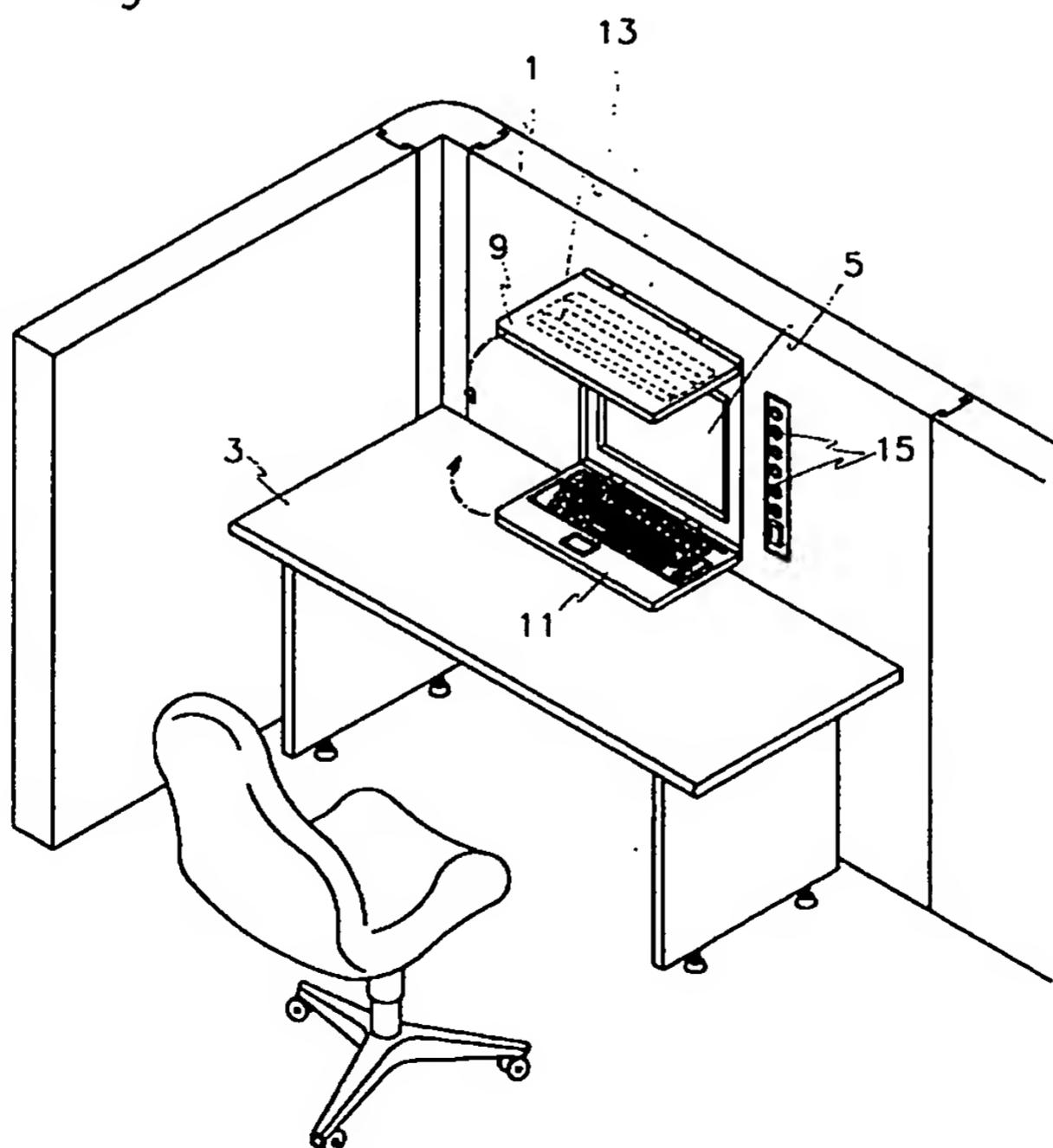
80538 München (DE)

### (54) Wall mountable computer assembly

(57) A computer-mountable wall assembly includes a wall member provided with a space for mounting a monitor, and a monitor mountable space defined in the wall member to mount a monitor. The computer-mount-

able wall assembly may further include a cover hingedly mounted on the wall member to cover a screen side of the monitor mounted on the wall member, and a desk panel hingedly mounted on the wall member.

Fig. 1



**Description****BACKGROUND OF THE INVENTION****(a) Field of the Invention**

[0001] The present invention relates to a computer-mountable wall assembly, and more particularly, to a wall assembly that can save desk space where the computer is normally disposed and used, thereby allowing the user to effectively use the space of the desk.

**(b) Description of the Related Art**

[0002] Generally, a modernized office is designed such that a plurality of desks are arranged and partitions are disposed around each of the desks so as not to disturb other workers.

[0003] In addition, mobile computers such as notebook computers, personal digital assistants, and handheld computers have become more popular because of their portability.

[0004] However, when such a mobile computer is used on a desk and connected with other peripheral devices, the desk becomes untidy, while reducing the desk space.

**SUMMARY OF THE INVENTION**

[0005] Therefore, the present invention has been made in an effort to solve the above-described problems.

[0006] It is an objective of the present invention to provide a computer-mountable wall assembly that can save desk space when the computer is disposed and used, thereby allowing the user to effectively use the space of the desk.

[0007] To achieve the above objective, the present invention provides a computer-mountable wall assembly comprising a wall member provided with a space for mounting a monitor, and a monitor mountable space defined in the wall member to mount a monitor.

[0008] The computer-mountable wall assembly may further comprise a cover hingedly mounted on the wall member to cover a screen side of the monitor mounted on the wall member, and a desk panel hingedly mounted on the wall member.

[0009] The wall member is further provided with a space for mounting a computer main body such that a port panel is exposed to an outside.

[0010] The cover comprises a panel hingedly mounted on the wall member above the monitor such that the panel can cover at least an upper half of the screen side of the monitor when it is folded on the monitor. A light is mounted on the panel.

[0011] The cover may comprise a keyboard hingedly mounted on the wall member such that the keyboard can cover at least a lower half of the screen side of the

monitor when it is folded to the monitor.

[0012] The wall member comprises a partition, and the monitor is selected from the group consisting of an LCD monitor, a notebook monitor, and a wall-mountable TV.

**BRIEF DESCRIPTION OF THE DRAWINGS****[0013]**

FIG. 1 is a perspective view of a computer-mountable wall assembly according to a preferred embodiment of the present invention;

FIG. 2 is a perspective view of a computer-mountable wall assembly when a computer is completely received in the wall assembly according to a preferred embodiment of the present invention;

FIG. 3 is a block diagram illustrating an electric connection of an assembly according to a preferred embodiment of the present invention;

FIG. 4 is a picture illustrating an example office where the present invention is employed; and

FIG. 5 is a picture illustrating example furniture where the present invention is employed.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

[0014] Preferred embodiments of the present invention will be described in more detail with reference to the accompanying drawings.

[0015] FIG. 1 shows a computer-mountable wall assembly according to a preferred embodiment.

[0016] In this invention, the term "wall" defines all kinds of members which can be regarded as a wall, for example, a partition or a wall of furniture; and the term "monitor" includes an LCD monitor, a notebook monitor, and a wall-mountable TV.

[0017] In this embodiment, a wall is given as an example of the partition 1. A desk 3 is disposed in front of the partition 1. The partition 1 is provided with a space in which a monitor 5 and a main body (not shown) are disposed. The desk 3 may be hingedly coupled to the partition 1 so that it can be foldable to the partition 1.

[0018] The monitor 5 is connected to an electric source (7 in FIG. 3). A monitor cover 9 for covering at least an upper half of a screen side of the monitor 5 is coupled to the partition 1. The cover 9 is hinged to the partition 1 above the monitor so that it can be opened by being pivoted upward. Mounted on the interior surface of the cover 9 is a light 13 which is also connected to the electric source, as shown in FIG. 3. The light 13 is designed to be automatically turned On when the cover 9 is opened.

[0019] In addition, a keyboard 11 is hingedly coupled on the partition 1 below the monitor 5 such that it can be folded to at least a lower half of the screen side of the monitor 5. In the case of a notebook computer, a main body of the computer may be installed in the key-

- board 11. Instead of hingedly coupling the keyboard on the partition 1, it may be detachably installed in a space of the partition so that a user can use the keyboard by detaching and disposing the installed keyboard on the desk 3.

[0019] Preferably, the main body is disposed in the partition 1 such that a main body port panel 15 on which, for example, a computer power switch and serial or parallel ports are provided, is exposed so that peripheral devices can be easily connected to the main body.

[0020] In a state where the cover 9 is covering the monitor, when the cover 9 is pivoted upward to expose the monitor screen, the light 13 is turned On (see FIG. 1).

[0021] In addition, in a state where the keyboard 11 is folded to the screen side of the monitor 5, when the keyboard 11 is pivoted downward, the user gains access to the keyboard 11.

[0022] In this state, by turning the switch 15 On, the computer is operated.

[0023] After using the computer, by folding the keyboard 3 and the monitor cover 9 on the screen side of the monitor 5, the monitor is completely covered as shown in FIG. 2, thereby providing a tidy environment around the desk 3.

[0024] FIGS. 4 and 5 show examples where the present invention is applied to a partition and to home furniture.

[0025] As described above, since the present invention provides a structure in which a computer or a mobile computer can be installed on a wall member, desk space can be effectively utilized.

[0026] In addition, since office space can be saved, office maintenance costs can be reduced.

[0027] When the computer is installed in a partition, the computer can be easily moved by moving the partition.

[0028] While this invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not limited to the disclosed embodiment, but, on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.

... mounted on the wall member.

3. A computer-mountable wall assembly of claim 1 further comprising a desk panel hingedly mounted on the wall member

10 4. A computer-mountable wall assembly of claim 1 wherein the wall member is further provided with a space for mounting a computer main body such that a port panel is exposed to an outside.

15 5. A computer-mountable wall assembly of claim 2 wherein the cover comprises a panel hingedly mounted on the wall member above the monitor such that the panel can cover at least an upper half of the screen side of the monitor when it is folded to the monitor.

20 6. A computer-mountable wall assembly of claim 5  
wherein a light is mounted on the panel.

25 7. A computer-mountable wall assembly of claim 2 wherein the cover comprises a keyboard hingedly mounted on the wall member such that the keyboard can cover at least a lower half of the screen side of the monitor when it is folded to the monitor.

8. A computer-mountable wall assembly of claim 1 wherein the wall member comprises a partition.

9. A computer-mountable wall assembly of claim 1 wherein the monitor is selected from the group consisting of an LCD monitor, a notebook monitor, and a wall-mountable TV.

## Claims

**1. A computer-mountable wall assembly comprising:**

a wall member provided with a space for mounting a monitor; and  
a monitor mountable space defined in the wall member to mount a monitor.

2. A computer-mountable wall assembly of claim 1 further comprising a cover hingedly mounted on the wall member to cover a screen side of the monitor

\* NOTICES \*

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

## DETAILED DESCRIPTION

---

### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention belongs to the structure which has the image display sections, such as flat display monitors, such as liquid crystal attached in the stand, and flat television.

[0002]

[Description of the Prior Art] When using it, hanging the image display section attached in the stand on a wall, it was the structure whose wall tapestry becomes possible by removing a stand from the image display section and attaching the fastener only for wall tapestries in the image display section.

[0003]

[Problem(s) to be Solved by the Invention] By the conventional approach, when using it, having hung the image display section attached in the stand on the wall, the fastener only for wall tapestries needed to be used. Since the fastener only for these wall tapestries is unnecessary when the image display section does not perform a wall tapestry in the image display device attached in the stand, it serves as an image display device on another components.

[0004] Since a wall tapestry becomes possible by changing and attaching the sense of a stand when using it by this invention, hanging the image display section attached in the stand on a wall, it becomes unnecessary to prepare the fastener only for wall tapestries.

[0005]

[Means for Solving the Problem] When removing a stand from the image display section, a stand can be easily removed by removing four screws for image display section immobilization. The removed stand is easily fixable to a wall with four screws perpendicularly. Unlike the installation condition before removing a stand, the stand will be rotated by 90 degrees ahead [ set ], but the stand fixed to the image display section and a wall can be easily attached using four screws for image display section immobilization, and, thereby, can be used, being able to hang on a wall.

[0006]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained based on drawing 7 from drawing 1.

[0007] Drawing 1 is the (a) front view and the (b) side elevation showing a liquid crystal display monitor. The liquid crystal display monitor consists of the image display section 1 and a stand 2.

[0008] Drawing 2 is the (a) rear view and the (b) side elevation which removed posterior part covering so that the connection place of the image display section 1 and a stand 2 might be in sight. Connection of the image display section 1 and a stand 2 is realized by concluding tilt unit 1a of the image display section 1, and a stand 2 with a screw 3 (4).

[0009] Drawing 3 is a perspective view in the condition that the stand 2 was connected with tilt unit 1a with the screw 3 (4). When using it, hanging the image display section 1 on a wall, in order that a stand 2 may play the role of a fastener without the fastener only for wall tapestries, suppose that it changes into the condition of having rotated 90 degrees of sense of a stand 2 ahead [ set ], and attaches in tilt unit 1a. Hereafter, drawing 4, and 5 and 6 explain decomposition of tilt unit 1a and a stand 2, and a connection method.

[0010] Drawing 4 is the decomposition perspective view of tilt unit 1a and a stand 2. First, a screw 3 (4) is removed and tilt unit 1a and a stand 2 are decomposed. Tilt unit 1a and a stand 2 can be easily decomposed by removing a screw 3 (4).

[0011] Drawing 5 is the decomposition perspective view of tilt unit 1a in the condition of having rotated 90 degrees of sense of a stand 2 ahead [ set ], and a stand 2. The screw hole is established in tilt unit 1a and a stand 2 so that a stand 2 can connect with tilt unit 1a also with this sense, and it can connect easily with a screw 3 (4).

[0012] Drawing 6 is in the condition of having rotated 90 degrees of sense of a stand 2 ahead [ set ], and is the perspective view which connected the stand 2 with tilt unit 1a with the screw 3 (4). In this condition, since a stand 2 is perpendicularly connected with the image display section 1, the image display section 1 and a wall surface are arranged in parallel by fixing the base of a stand 2 in parallel with a wall surface.

[0013] Drawing 7 is the (a) front view in the condition of having hung the image display section 1 which attached posterior part covering on the wall, and the (b) side elevation. By fixing a stand 2 to a wall with a screw 4 (4), the image display section 1 can be changed into the condition of having hung on the wall.

[0014] Since a wall tapestry becomes possible by changing and attaching the sense of a stand when using it by the above, hanging

the image display section 1 on a wall, it becomes unnecessary to prepare the fastener only for wall tapestries.  
[0015]

[Effect of the Invention] Since a stand constitutes the role of a fastener and the wall tapestry of it becomes possible by changing and attaching the sense of a stand without the fastener only for wall tapestries when using it by this invention, hanging the image display section attached in the stand on a wall, it becomes unnecessary to prepare the fastener only for wall tapestries. Thereby, expenditure can be suppressed and it can contribute also to saving-resources-ization.

---

[Translation done.]

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER: \_\_\_\_\_**

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image  
problems checked, please do not report these problems to  
the IFW Image Problem Mailbox.**